REMARKS / DISCUSSION OF ISSUES

The present amendment is submitted in response to the Office Action mailed August 2, 2010. Claims 1-4, 6-14 and 16-22 remain in this application. Claims 1, 11 and 19 have been amended. In view of the remarks to follow, reconsideration and allowance of this application are respectfully requested.

Interview Summary

Applicants appreciate the courtesy granted to Applicant's attorney, Michael A. Scaturro (Reg. No. 51,356) and inventor, Dr. Dagnachew Birru, during a telephonic interview conducted on Monday, October 25, 2010. During the telephonic interview, the general operation of the invention was discussed. Applicant's attorney and Dr. Birru presented reasons why the cited and applied art, in particular Rosenberg, does not teach the subject matter of Applicant's claim 1, as a proxy for the independent claims. The Examiner appreciated the reasons provided and suggested amending claim 1 to more clearly and precisely distinguish over Rosenberg. Applicant's Attorney has amended the independent claims in accordance with the Examiner's suggestion.

Rejection under 35 U.S.C. §103(a)

The Office has rejected claims 1-4, 6-14, 16-18 and 21-22 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application No. 2004/0057535 ("Strolle") in view of U.S. Patent No. 5,884,064 ("Rosenberg"). Applicants respectfully traverse the rejections.

Claim 1 and claims 2-4 and 6-10 depending there-from, are directed to a system for multiplexed transmission of normal and robust digital video data. Amended independent claim 1 is reproduced below in clean form for ease of reference.

1. (Currently Amended) A system for multiplexed transmission of normal and robust digital video data, comprising:

a multiplexer switching between normal and robust data inputs;

one or more units <u>configured to randomize, format, interleave and encode data</u> output from the multiplexer into <u>first</u> encoded data packets <u>associated with the normal data input and second encoded packets associated with the robust data input</u>; and

a <u>post-</u>processing unit <u>configured to deinterleave the first and second</u> encoded data

Appl. No. 10/533,711   **Page 11 of 15**
Amendment and/or Response
Reply to Office action of 02 August 2010

packets produced by the one or more units, <u>further comprising the steps of:</u>

<u>(a)</u> removing a trailing portion from each <u>of said first and second</u> encoded data <u>packets</u>, and

<u>(b)</u> derandomizing a remaining portion of each <u>of said first and second</u> encoded data <u>packets,</u>

wherein <u>said step of</u> removing a trailing portion from each <u>of said first and second</u> encoded <u>data packets</u> includes <u>one of:</u>

removing <u>reed-solomon</u> parity bytes <u>from said first encoded data packets, and</u>

removing encoded digital information bytes <u>from said second encoded data packets,</u>

<u>wherein said reed-solomon parity bytes are different from said encoded digital information bytes.</u>

Claims 1 and 2-4 and 6-10 are allowable

The cited portions of Strolle and Rosenberg, individually or in combination, fail to disclose or suggest the specific combination of claim 1, as amended herewith. For example, the cited portions of Rosenberg fail to disclose or suggest, *wherein said step of removing a trailing portion from each of said first and second encoded data packets includes one of: removing* <u>*reed-solomon parity bytes from said first encoded data packets, and removing encoded digital*</u> <u>*information bytes from said second encoded data packets, wherein said reed-solomon parity bytes are*</u> <u>*different from said encoded digital information bytes*</u>, as in claim 1. Emphasis Added. In contrast to claim 1, the cited portions of Rosenberg merely describe a VP emulator that accumulates nine cells and removes a 48 byte payload from each of the nine cells. It then concatenates each of the payloads together in the order they were received to form a payload of 432 bytes. The 432 bytes are processed in a conventional manner after which an eight byte trailer is removed to form a 424 byte block. The VP emulator then partitions the 424 byte block into the original 53 byte cells to be presented to an associated edge switch for routing to a LAN or PBX. See Rosenberg, Col. 2, lines 65-67 through Col. 3, lines 1-10. However, the cited portions of Rosenberg fail to disclose or suggest removing a trailing portion from each of said first and second encoded data packets includes one of: removing reed-solomon parity bytes from said first encoded data packets, and removing encoded digital information bytes from said second encoded data packets, wherein said reed-solomon parity bytes are different from said encoded digital information bytes, as in claim 1.

Rosenberg addresses and purports to solve an entirely different problem than that of a system for multiplexed transmission of normal and robust digital video data. Accordingly, Rosenberg does not address the aspect of differentiating between two distinctly different data streams (i.e., normal and robust). It therefore follows that Rosenberg does not teach or suggest removing reed-solomon parity bytes from a normal data stream and otherwise removing digital information bytes from a robust stream to make the two streams MPEG-2 compliant. Instead Rosenberg merely discloses remoing an 8 byte trailer from a 432 byte block to form a 424 byte block to make the 424 suitable for use by an edge switch for routing to a LAN or PBX.

With reference now to Applicant's Fig. 1, the system of the invention utilizes an enhanced transmission system 100 including two components: an enhanced VSB encoder 101 and a standard (conventional) encoder/modulator 102. Utilizing the enhanced VSB encoder 101 on the studio side allows the standard (conventional) encoder/modulator 102 to be used without modification, thus making the transmission system 100 backward compatible for use with normal data inputs. The enhanced VSB encoder 101 is specifically designed to allow for the continued unmodified use of the standard encoder/modulator 102 while providing enhanced capabilites for processing robust data inputs.

With continued reference to Applicant's Fig. 1, in operation, the enhanced VSB encoder 101 flexibly receives both normal and robust data inputs that are switched by multiplexer 104. The output of the multiplexer 104 is randomized by randomizer 106. The randomized stream is then Reed-Solomon encoded by RS encoder 107. The RS encoder 107 is a conventional RS encoder that simply adds parity bytes to both the normal and robust data streams. The RS encoded data is then processed into packets and interleaved by packet formatter 108 and interleaver 109. Packet formatter 108 leaves the normal stream unchanged, but reformats the robust stream. For example, by expanding 207 bytes into two 414 byte streams by duplicating bits and placing placeholder bytes with the already existing bytes. The interleaved data is trellis coded by encoder 110. Parity byte generator 111 generates parity bytes for the trellis coded, interleaved robust data stream. The parity bytes computed by the parity byte generator replace the placeholder bytes placed there by by packet formatter 108. It

Appl. No. 10/533,711   Page 13 of 15
Amendment and/or Response
Reply to Office action of 02 August 2010

should be understood that the placeholder bytes of the robust steam are spread all over the reformatted packet. Post-processor 112 receives trellis encoded data and converts it into MPEG-2 compliant packets on the studio side. The output of deinterleaver 201 of post-processor 112 contains 207 bytes per packet. Unit 203 removes 20 trailing bytes of each packet to obtain 187 bytes, thus making the packets MPEG-2 compliant. A key distinguishing aspect of Applicant's inventive transmission system is that for the normal data stream packets, the 20 removed bytes correspond to Reed-Solomon parity bytes and for the robust data stream packets, the 20 removed bytes contain actual encoded data. However, it should be understood that the 20 bytes removed from the encoded robust data stream packets is subsequently recovered by the Reed Solomon encoder on the transmitter side. See RS encoder 115 as an element of the Standard VSB modulator (transmitter side). Applicant respectfully submits that the cited portions of Rosenberg fail to disclose or suggest removing a trailing portion from each of said first and second encoded data packets includes one of: removing reed-solomon parity bytes from said first encoded data packets, and removing encoded digital information bytes from said second encoded data packets,wherein said reed-solomon parity bytes are different from said encoded digital information bytes, as in claim 1. The Office does not cite Strolle for teaching this feature. Hence, claim 1 is allowable. Claims 2-4, 6-10 and 21 are allowable, at least by virtue of their respective dependence from claim 1.

Independent Claim 11 recites similar subject matter as Claim 1 and therefore contains the limitations of Claim 1. Hence, for at least the same reasons given for Claim 1, Claim 11 is believed to contain patentable subject matter. 12-14, 16-18 and 22 are allowable, at least by virtue of their respective dependence from claim 11.

In the Office Action, Claims 19 and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Strolle, in view of Rosenberg and further in view of U.S. Patent No. 7,432,251 ("Choi"). Applicant respectfully traverses the rejections.

As explained above, the cited portions of Strolle and Rosenberg do not disclose or suggest each and every element of claim 1 or claim 11. Independent Claim 19 recites similar subject matter as Claims 1 and 11 and therefore contains the limitations of Claims 1 and 11. Hence, for at least the same reasons given for Claims 1 and 11, Claim 19 is believed to

Appl. No. 10/533,711   Page 14 of 15
Amendment and/or Response
Reply to Office action of 02 August 2010

contain patentable subject matter. Choi does not disclose each of the elements of claims 1 or 11 that are not disclosed by Strolle and Rosenberg. Choi is cited by the Office for disclosing a system for incorporation into the system of Strolle as modified by Rosenberg for the benefit of a robust system.
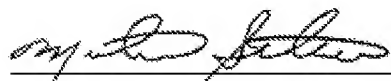
Thus, the cited portions of Strolle, Rosenberg and Choi, individually or in combination, do not disclose or suggest does not disclose or suggest each and every element of claim 19. Hence claim 19 is allowable and claim 20 is allowable, at least by virtue of its respective dependence from claim 19.

Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application, namely, Claims 1-4, 6-14, 16-18 and 21-22 are believed to be in condition for allowance and patentably distinguishable over the art of record.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call Mike Belk, Esq., Intellectual Property Counsel, Philips Electronics North America, at 914-333-9643.

Respectfully submitted,

Michael A. Scaturro
Reg. No. 51,356
Attorney for Applicants

Mailing Address:
Intellectual Property Counsel
Philips Electronics North America Corp.
P.O. Box 3001
345 Scarborough Road
Briarcliff Manor, Previously Presented York 10510-8001
Telephone – (914) 945-6000

Atty. Docket No. US020423 [MS-452]